

**REMARKS**

This Amendment is filed in response to the Office Action dated August 24, 2004. This application should be allowed and the case passed to issue. No new matter is raised by this amendment. The amendment to claim 1 is supported by claim 4 as originally filed. New claim 12 is supported by claims 1 and 5 as originally filed. Support for new claim 13 is found in originally filed claim 4.

Claims 1-3 and 5-13 are pending in this application. Claims 7-11 have been withdrawn. Claims 1-6 have been rejected. Claim 1 is amended. Claim 4 is canceled. Claims 12 and 13 are newly added.

***Claim Rejections Under 35 U.S.C. § 102***

Claims 1-3 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sano (JP 9-167719). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the invention as claimed and the cited prior art.

An aspect of the invention, per claim 1, is a solid electrolytic capacitor comprising an anode composed of a metal. A dielectric layer composed of an oxide of the metal is formed on the surface of the anode. An electrolytic layer and cathode layer are formed on the dielectric layer in this order. The cathode layer has a laminated structure of a carbon layer and a metal layer composed of metal particles having an average particle diameter of not larger than 0.05  $\mu\text{m}$  formed on the carbon layer. The metal layer includes a protective colloid.

The Examiner asserts that Sano (FIG. 1) discloses a solid electrolytic capacitor comprising a tantalum anode with an oxide layer (2), an electrolytic layer (3), a cathode layer comprising gold metal particles (5) within an average particle diameter range of 0.01 to 0.05  $\mu\text{m}$  laminated on a carbon layer (4).

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Sano does not disclose that the metal layer includes a protective colloid, as required by claim 1, Sano does not anticipate claim 1.

Applicants further submit that Sano does not suggest the claimed solid electrolytic capacitor.

#### ***Claim Rejections Under 35 U.S.C. § 103***

Claims 1-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Arai et al. (U.S. Patent No. 5,621,608) in view of Deffeyes et al. (U.S. Patent No. 4,463,030). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The Examiner avers that Arai discloses (FIG. 2) a solid electrolytic capacitor comprising a metal anode (1) with an oxide formed thereon (2), an electrolytic layer (3, 4), and a cathode layer comprising silver particles (6) laminated on a carbon layer (5). The Examiner acknowledges that Arai does not disclose that the silver particles have an average particle size of not greater than 0.05  $\mu\text{m}$ . Relying on the Deffeyes' teaching of a silver paint comprising particles not greater than 0.05  $\mu\text{m}$ , the Examiner concluded that it would have been obvious to modify the capacitor of Arai using the silver paint of Deffeyes to form a layer having a low fusion or film forming temperature.

Arai and Deffeyes, whether taken alone, or in combination, do not suggest the claimed solid electrolytic capacitor. Deffeyes does not disclose forming a cathode layer for a solid electrolytic

capacitor. Further, Deffeyes does not teach forming such a cathode layer with a metal layer including a protective colloid and composed of metal particles having an average particle diameter of not larger than 0.05  $\mu\text{m}$ . Deffeyes disclose that the silver paint is fused after being applied to the substrate. As one of ordinary skill in this art would recognize, fusing particles causes their particle size to grow. Thus, the particle size of the metal particles laminated on a substrate according to the Deffeyes process are much larger than asserted by the Examiner. In addition, as applied to the substrate surface, the “metal” particles applied by Deffeyes are nonconductive metalloorganic compounds. The nonconductive metalloorganic compounds particles of Deffeyes have to be heated to higher temperatures than disclosed in the instant specification to convert the nonconductive particles to a conductive, fused metal layer. Metal particles, such as gold, silver, platinum do not fuse at the temperatures disclosed in the instant specification for drying the metal paste (up to 170°C).

The only teaching of the claimed solid electrolytic capacitor comprising a metal layer composed of metal particles having an average particle diameter of not larger than 0.05  $\mu\text{m}$  and including a protective colloid is found in Applicant’s disclosure. However, the teaching or suggestion to make a claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The Examiner has not provided a factual basis for asserting that the combination of the Arai and Deffeyes would provide the claimed invention. The Examiner's retrospective assessment of the claimed invention and use of unsupported conclusory statements are not legally sufficient to generate a case of *prima facie* obviousness. The motivation for modifying the prior art must come from the prior art and must be based on facts. The Examiner's conclusion of obviousness is not supported by any factual evidence. It appears that the Examiner's conclusion of

Application No.: 10/810,825

obviousness is based on improper hindsight reasoning. Applicants submit that the combination of Arai and Deffeyes et al. does not suggest the claimed solid electrolytic capacitor.

The dependent claims are allowable for at least the same reasons as the independent claims and further distinguish the claimed invention.

New claims 12 and 13 distinguish over the claimed invention, as the cited prior art does not suggest the claimed solid electrolytic capacitor comprising a metal layer comprising a metal layer composed of metal particles having an average particle diameter of not larger than 0.05  $\mu\text{m}$  and an electrolytic layer composed of a conductive polymer.

In view of the above remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Bernard P. Codd

Registration No. 46,429

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 BPC:kap  
Facsimile: 202.756.8087  
**Date: December 23, 2004**

**Please recognize our Customer No. 20277  
as our correspondence address.**